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Another Slotting Machine Bar.

Editor *American Machinist*:

In your issue of January 21st I note a communication from A. S. Bergh, with illustration of a slotting machine bar therein described. There are, however, serious objections to this tool as shown; moreover, it is very far behind the age; and I think that perhaps some of your readers may profit a little by a description of a similar bar made by me as long ago as 1851 and used on the first slotting machine introduced into this country.

The machine in question came from the works of Joseph Whitworth, England, in 1849. I have no doubt but that the identical bar constructed by me in the year mentioned is still in use, as I know of its continued use, as well as several duplicates of it, for about ten years, at the expiration of which time it was practically as good as when first made.

The bar was a plain, straight octagon, as shown in the figures, slotted through equal in width to one face of the octagon, and without any member at the bottom to tie the two sides of the slot together, as in Mr. Bergh's bar. The fulcrum pin was placed back of the center, as shown; and the tool slot in the oscillating box, cut so as to encroach upon the fulcrum pin about one-half its diameter.

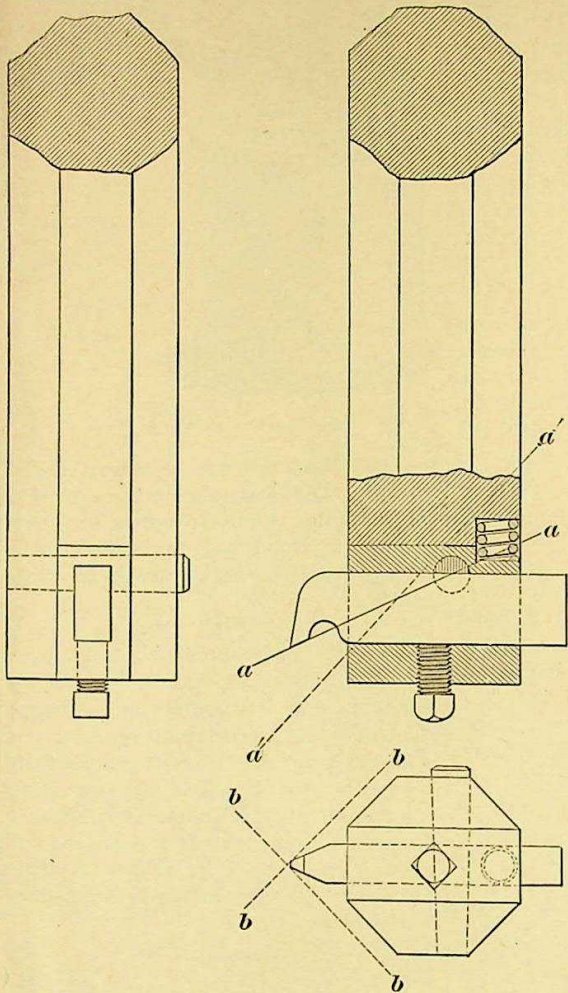
The objects of this construction were: First, to bring the line *aa* as nearly right angled to the axis of the bar as possible, in order to avoid chattering and the tendency of a dull tool to push away from the work, if *aa* makes very much more than a right angle with the bar—as will be readily understood by every mechanic using a planing machine or a shaper—and as seen in Mr. Bergh's bar, the angle in the latter being shown by the dotted line *a'a'*. The next object was to permit of the bar being placed in the tool box of the slotter slide at eight positive positions, and, with a comparatively small projection of a cutting tool out of the bar, to permit of working both ways into a corner, as shown by dotted lines *bb* in plan view.

A round shank, as shown in Mr. Bergh's bar, is objectionable as being difficult to set in an ordinary tool box of a slotter in any chosen position, and to hold firmly when so set, while the square lower end will not permit of the bar's being used in a corner, as shown for the octagon bar, without projecting the cutting tool from it an inordinate amount.

Ten years' use of the bar described proved its strength and durability, and application to a great variety of work.

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SLOTING MACHINE BAR.